

----- ST REPORT ONLINE MAGAZINE -----
"The Original 16/32bit Online Magazine"

from
STR Publishing Inc.
"

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No.6.20

STReport Online Magazineâ €
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** F-NET NODE 350 ** 500mb Online **
STR'S owned & operated support BBS
carries ALL issues of STReport Online Magazineâ €
and
An International list of private BBS systems
carrying STReport Online Magazine for their users enjoyment

> 05/18/90: STReportâ € #6.20 The Original 16/32 bit Online Magazine!

- The Editor's Podium - CPU REPORT - CPU STATUS REPORT
- ANNUAL STOCK REPORT - TRACKER UPDATE - PHONEY D/L's?
- RTX OS Overview - RENTALS OK? - LOOSING GROUND
- CIS FOLIO CONTEST - MT C-Shell - CPU CONFIDENTIAL

-----** DEVELOPERS RECEIVING TT030 UNITS! **-----
---** CONSUMER REPORTS-> PORTFOLIO "CUTE" **---
-==** STe-> LATE JUNE -- EARLY JULY **=-

ST REPORT ONLINE MAGAZINEâ €
"Only UP-TO-DATE News and Information"
-* FEATURING *-

Current Events, Up to Date News, Hot Tips, and Information
Hardware - Software - Corporate - R & D - Imports

STReport's support BBS, NODE # 350 invites systems using Forem ST BBS to
participate in Forem BBS's F-Net mail network. Or, Please call # 350
direct at 904-786-4176, and enjoy the excitement of exchanging ideas about
the Atari ST computers through an excellent International ST Mail Network.

AVAILABLE ON: COMP-U-SERVE ~ DELPHI ~ GENIE ~ BIX

> The Editor's Podiumâ €

Well, five months have passed since we changed our name and frankly, the vast majority of our readers have expressed that they liked the STReport name and wanted it back. So.... in yielding to the wishes of our readers we have reverted back to our original name. And to celebrate the change we have set the volume number to six and the issue number to the twentieth week of this year. Its heart warming to know how many readers we have who really care to seek out and read our humble offering of STReport each week.

Lately, there has been a flurry of 'infobits' circulating that have been flawed or reported incorrectly, STReport too, has had its share of inaccuracies and for those we do apologize, but at the same time, we wish to stress the fact that we fervently try to present to our readers the most accurate, up to date items humanly possible. Sometimes, in reporting the very latest news, certain items, for any number of reasons, are not fully revealed. In most cases, this means that; "hey there is something going down here, but we don't have or can't report the whole story.. yet". Rather than not say anything at all, and perhaps, miss the "scoop", we hastily forge ahead and produce a "never ending story". This was/is the case relating to the NEC situation, we knew there were some heavily entwined dealings occurring and we might add, still are (although not fully concluded). As result, it was decided to at least offer a partial story in our 'confidential' column as sort of a 'teaser' that could easily lead into the bigger picture. It did and will continue to do so. And when the 'full and real' NEC story is ready to break you will read it here first as you did when the inklings were first being made available.

Lastly, we find ourselves somewhat at a disadvantage in our steadfast resolve of honoring our pledge to various co-operating individuals who request that besides their identity, certain items be kept confidential because of their sensitivity and traceability. As a result in many cases, we have the "full story" but are unable to report it in its entirety at that particular time. Also, an unfortunate viewpoint recently told to us is that perceived by those who are obviously biased and narrow minded; as stated; "if they must remain secret then they are involved in some kind of wrongdoing." Its is a sad state of affairs when seemingly intelligent individuals must make such ludicrous statements in an obvious attempt to force the exposure of someone or invalidate information. We submit that in this "twisted world of corporate demagogues" there are still those who have a conscience and are willing to shed the light of truth on otherwise mysteriously clouded issues. Unfortunately, the demagogues are still in power and therefore, can effectively destroy careers.

We have included excerpts from the annual stockholders report in this issue which seem to indicate that Atari, once again, has its sights set on the USA and ..that its "in the works." Time will tell.....

Thanks to all for your strong support!!

Ralph.....

:HOW TO GET YOUR OWN GENIE ACCOUNT:

To sign up for GENie service: Call: (with modem) 800-638-8369.

Upon connection type HHH (RETURN after that).
Wait for the U#= prompt.

Type: XTX99587,CPUREPT then, hit RETURN.

**** SIGN UP FEE WAIVED ****

The system will now prompt you for your information.

THE GENIE ATARI ST ROUNDTABLE - AN OVERVIEW

The Roundtable is an area of GENie specifically set aside for owners and users of Atari ST computers, although all are welcome to participate.

There are three main sections to the Roundtable: the Bulletin Board, the Software Library and the Real Time Conference area.

The Bulletin Board contains messages from Roundtable members on a variety of Topics, organized under several Categories. These messages are all Open and available for all to read (GENie Mail should be used for private messages).

If you have a question, comment, hot rumor or an answer to someone else's question, the Bulletin Board is the place to share it.

The Software Library is where we keep the Public Domain software files that are available to all Roundtable members. You can 'download' any of these files to your own computer system by using a Terminal Program which uses the 'XMODEM' file-transfer method. You can also share your favorite Public Domain programs and files with other Roundtable members by 'uploading' them to the Software Library. Uploading on GENie is FREE, so you are encouraged to participate and help your Roundtable grow.

The Real Time Conference is an area where two or more Roundtable members may get together and 'talk' in 'real-time'. You can participate in organized conferences with special guests, drop in on our weekly Open Conference, or simply join in on an impromptu chat session. Unlike posting messages or Mail for other members to read at some later time, everyone in the Conference area can see what you type immediately, and can respond to you right away, in an 'electronic conversation'.

> CPU REPORTâ ¢
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by Michael Arthur

Remember When....

In December 1979, a Xerox Employee named Lawrence G. Tesler was showing Steve Jobs and Apple execs some of its innovations in Graphical User Interfaces, and was so impressed by Apple's sophistication in the field of computer science that he immediately decided to join Apple?

And when Tesler then became the software director of the group developing the Lisa computer, was later involved with the design of the Macintosh, and is now the Head of Apple's Advanced Technologies R&D Division?

CPU MacNewsâ €
=====

Apple Makes Bid to Regain Educational Market, Delays System 7.0

Apple Computer has announced that it will be providing Educational Sales discounts of around 40 - 60 percent for its Macintosh Plus and SE line of computers. With this discount, schools and universities will be able, for example, to purchase a Mac Plus for \$700 - \$1100, a Mac SE for around \$1500, and a Mac SE/30 for \$2300 - \$2600....

Many industry analysts see this as both an attempt to displace the millions of aging Apple II computers now in the educational market, and to regain its share of the Educational Computer Market. Dataquest Inc., states that Apple now has a 42 percent share in this market, while it had a 58 percent share in 1988. Interestingly, many Apple II users have expressed great concern over the possibility of Apple "phasing out" their computer line. Also, Apple officials have commented that a low-cost version of the Mac (rumored to cost \$2500 - \$3000) will be introduced in 1991, and one official recently said that Apple II compatibility was a "major concern" for such a machine....

Apple has also announced that Version 7.0 of the Macintosh System Software won't be shipping until 1991. Apple first announced System 7.0 in May of 1989, and had last said that it would be available before September. While many Macintosh Developers have System 7.0 Development Kits, Apple has experienced problems both debugging several new features of System 7.0, and making it run comfortably with large applications on Macintoshes with 2 Megs of RAM....

But ponder, if you will, this question:

- 1) Should Atari boost its manufacturing facilities, given the demand for STs that a properly coordinated US Marketing strategy could bring, and given the enormous problems it has had stocking inventory for USA's Dealers?

> CPU STATUS REPORTâ €
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- Menlo Park, CA INFOCOM SCRAPPED IN MEDIAGENIC'S BID FOR SURVIVAL

In the wake of losing a patent infringement suit against Magnavox, Mediagenic has announced that it will be discontinuing several "unprofitable divisions", including its Triton Mail order company, the Apple Presentation Tools Division, and Infocom Inc., in order to pay court costs. This is expected to cost a fiscal year net loss of \$19 million dollars for Mediagenic, whose estimated 1990 net revenue will be \$65 million....

Mediagenic is discontinuing Infocom Inc., which helped pioneer the entertainment software industry, because of "continuing poor financial performance", and what it calls a "stagnant domestic...entertainment software market". Mediagenic now intends to concentrate on its profitable Nintendo Games Division, ZSoft, and its distribution of computer software products. Interestingly enough, the only "unprofitable" division which wasn't axed was the one which Mediagenic started out as: ACTIVISION....

- Monterrey, CA DIGITAL RESEARCH INTRODUCES DR-DOS 5.0

Digital Research has introduced version 5.0 of its DR-DOS Operating System. DR-DOS is an MS-DOS compatible OS which provides several features not found in MS-DOS, and which now has a growing share in the DOS marketplace. Version 5.0 includes support for several DOS LAN Networks (such as Novell Netware), FileLink (for improved file transfer capabilities), disk caching, and other features which were previously available only as add-in products.

One of its prime features is MemoryMAX, a memory management facility which moves DOS, TSR programs, memory buffers, network drivers, and other "memory-resident" utilities into a PC's "high memory" space, in order to maximize the use of the 640K of RAM available to DOS. DR-DOS also supports LIM EMS 4.0, and can use MemoryMAX to utilize the memory management abilities of Intel's '286, '386, and '486 chips....

- Minneapolis, MA CRAY RESEARCH OFFERS UPDATED, LESS EXPENSIVE CRAY Y/MP

Cray Research has introduced the Cray Y/MP2E, a new version of the Y/MP Supercomputer, which features Cray Y/MP Performance for \$2.2 Million dollars, or a fraction of the old Cray Y/MP's price. The Y/MP2E runs UNICOS 6.1 (Cray Research's version of AT&T Unix for its machines), which currently has over 300 commercial software packages available for it, and incorporates standard Cray Y/MP Memory and Processor Modules.

The Cray Y/MP2E comes in 6 configurations: With 1-2 processors, and

16 - 64 Megabytes of RAM, which are priced from \$2.2 - \$5 Million Dollars. However, the real benefit of this new supercomputer is in its lesser installation and maintenance costs. It can also be either air-cooled or water-cooled. With the Y/MP2E, Cray Research is expected to become a dominant competitor in the growing minisupercomputer industry, which first emerged to fill the price gap between "real supercomputers" and minicomputers....

- Cambridge, England ATARI UK UPDATES ATW, REVITALIZES ATW USER SUPPORT

Atari UK has recently announced a new version of the ATW (or the Atari Transputer Workstation), which has SCSI Support, a new ANSI C Compiler and Source Level Debugger, and enhancements to its Helios Operating System. Among these improvements are an updated filing system, and an X/Windows Toolkit. Support for TCP/IP, NFS (Network File System), and X/Windows Release 11.4 (with Version 2.0 of the X/Desktop GUI) will be available later this year....

Also, Atari has established a new Research and Development Office in England (which is expected to focus on the ATW), and has set up a series of new support packages for all ATW Users and Developers. Interestingly, it seems that the ATW has not only escaped "Vaporware Status", but is doing well in Europe....

> PHONEY D/L COUNTS! STR SOUND OFFâ € D/L counts cannot be TRUSTED!
=====

A TEMPEST IN A TEAPOT?
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by R.F. Mariano

This last week on GENie, the accusations have been flying fast and furious about the supposed padding of the download counts of the two major on-line publications. The discussion even reached the point where statements like "....I find it rather astounding that GENie, via one of its sysops, would be an agent or an accomplice in allowing surreptitious download boosting by ZNet..." were made. Luckily, these types of comments came to a halt when Neil Harris cleared things up by stating "GENIE AND THE SYSOPS DID NOT COOPERATE WITH THE Z-NET EXPERIMENT IN INCREMENTING THEIR OWN DOWNLOAD COUNTS." It got so bad that the editor of one of the smaller, and newer, on-line magazines got caught up in all of the rhetoric and resorted to the words "FRAUD AND FRAUDULENT" in his reporting.

What was it that caused this 'TEMPEST IN A TEAPOT' TO BOIL OVER?

What started out as unsupported and questionable accusations by the Z-Net On-Line editors stating...

"...the total download numbers you see next to the online magazine.....are being tinkered with" and "let us state that this is NOT in any way intended to be an attack or an accusation of any specific person or publication"

Once the smokescreen cleared, the true intent was brought forward. The issues soon escalated to specific names being mentioned (they can use our name in their editorials/tirades in the future, just make sure its spelled correctly) and ridiculous innuendos that Darlah, the ST Roundtable Lead sysop on GENie, was yielding to pressure exerted by STReport if she disagreed with any Z-Net's accusations....for example, we quote:

"Stepping into the STR area brings calls to you and myself and I suppose those calls are reflective in your presentation".

What started out as Z-Net On-Line telling their users exactly how to pad the download count...

"so....the general public would be able to fully appreciate the situation" degenerated to the real intent, as John Nagy said "Now, the 'advantage' (more properly, DISADVANTAGE) is evenly distributed", i.e., so that the Z-Net On-Line readers would NOW KNOW HOW TO <EVEN UP> THE DOWNLOAD COUNT.

....(We will not repeat their explicit instructions as we would rather loose the download 'race' and know that our count was as accurate as possible than resort to such chicanery.

While we firmly believe that the editors of a magazine have the right to state their own opinions in their editorials, we also feel that an editor should make every legitimate attempt to ensure that the facts are correct to best of his ability. Statements like....

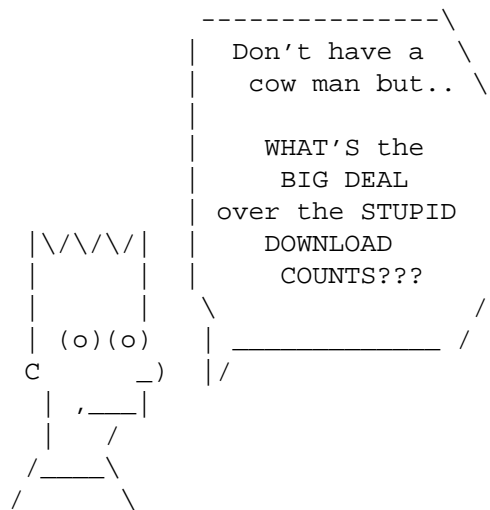
"In September '89...we 'pumped' the ST-ZMAG numbers all weekend...At the time, a 'normal' week count might have ST-ZMAG at 350-400, and the competition a comfortable 60 or so ahead. The week in question, we pressed ST-ZMAG to an absurd 700 plus. And guess what? The "other" magazine stayed...60 ahead"

While the above might make for exciting reading, in reality, it only takes a moment or two to check the real download figures. And the real download figures show that ST-Zmag didn't reach the 700 plateau until 12-08-89 (not September, 1989) and that week ST-Zmag had 775 downloads to STReport's 718. No matter what type of "New Math" you've been taught, there is no way that STReport was "60 ahead" as ST-Zmag claimed....in fact, it was ST-Zmag who was almost 60 ahead in download count.

While STReport has had suspicions of 'padding' of download counts for over a year, we felt that the responsible thing to do was to be discreet and pursue the phoney download count situation behind the scenes and not create a public spectacle. We felt that 'suspicions' and 'feelings' did not add up to facts and that it would be sensationalistic grandstanding nonsense. And above all else, it would represent the epitome of insult to the readers and supporters of the online magazines to go public with accusations of download tampering without having real proof. If other

online mags must resort to sensationalism, unfounded accusations and misleading facts to get headlines, then so be it.

So where does STReport stand regarding this 'tempest'? Notwithstanding the fact that ST-Zmag has had to resort to padding of their download counts (by their own admission), we know this; we have never padded our download count and we would hope that our readers have not "tried to help us". We would hope that our readers have enough confidence in the premier on-line magazine to know that what's important is the contents of the magazine, not the supposed download count. Yes, we take great pride in being the leading online magazine, but we take infinitely more care and pride in releasing a quality publication each week and most importantly, not trying to make the news, but in reporting it.



Thanks Neil....:-)

> RENTALS.. OK? STR Spotlightâ ¢ What's the story, Jerry?
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THE BLIND LEADING THE BLIND

by Dick Biow

A few years ago, I got some solid information about the legality of renting copyrighted software, as presented by the legal department of a

multi-million-dollar software publisher. I'd wanted to write a story on software piracy for an ST-related mag. So I told the legal expert, "I want to rent a copy of your software from a rental house. I'll keep all records and turn them over to you. Then you take action against these rental chiselers, I'll testify, let the government jail them, and we'll accomplish some healthy goals."

My great journalistic crusade never got started because, as the legal expert made clear, it was legal to rent software, just as long the rental materials supplied were original docs and original disks. The procedure is illegal *only* if pirate copies are supplied, which most renters are too smart to do.

The publisher's legal staff that I contacted had hoped to lobby Congress to pass a bill making *all* software rental illegal. I doubt that such a bill has been passed by Congress, or every computer magazine in the U.S. would have featured the resulting change in copyright law by now. (I have not checked this recently with an attorney.)

What does this all mean? It means that a bunch of self-righteous clowns have probably -- and most unfairly -- smeared members of a Pittsburgh Atari association, whose providing of rental programs may well be as legal as ambling across the street on a "walk" light. They've fed one another's indignation with blatant accusations based on ignorance. As a group, they owe apologies. As individuals, if they continue their accusations, they have a bit of a cause to worry about playing the part of defendants in slander suits. (I didn't have to consult an attorney to write this article. But *they* should have done so before playing with the possibility of slander.)

How do we prevent such folly in the future? Let's get our facts straight before charging into the fray with loud allegations. If we feel that software rental should be made illegal (as I most certainly do), let's write letters to our Congressmen, not just to our favorite ST publications.

We'll never gather supporters by raging at renters. And we'll certainly never persuade the renters to stop renting by accusing them unfairly of crimes!

> SEZ WHO? STR SOUND OFFâ € "Let he who is without sin cast...."
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READER MAIL OF NOTE
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Dear Ralph,

I am not a particularly good writer, but I feel there may be some facts that have been distorted a bit surrounding the Pittsburgh menagerie that must be brought to light.

I have been following the messages and articles concerning the events that took place in Pittsburgh the weekend of April 28-29 in your publication and on GENie and one very interesting comment was made in error. You see, I attended the show both days in Pittsburgh and you could say that I was in the right place at the right time to over hear a conversation between Gribnif and the vice president of PACE. Let me set the record straight, however, before I go on. I am not a member of either user group in Pittsburgh. I was a member of PACE, a while back, but let my membership expire for several reasons. I do however, have friends in both groups, and have a good friend who is an officer of PACE. That's why I ask that you not reveal my name.

Well, let me paraphrase a message that appeared on GENie and in your publication last week. It was mentioned that a certain individual had been speaking with Rick of Gribnif Software and had a purchased copy of version 1.0 of NeoDesk that he wanted to upgrade. Rick told him that the upgrade would cost \$20.00 and the gentleman was offended by the price and stated that he could get it cheaper "somewhere else." Rick was taken back by this because he knew that NeoDesk could not be purchased anywhere for that price and immediately concluded that the individual was going to pirate the software.

The funny thing about this is that all of the PACE representatives, such as Phil Hanze, Bruce Markey, and Jeff Solomon and even Bob Brodie have stated that this person was a member of the infamous Atari Elite club. Well, let me tell you that these people where either 1) Misinformed, or 2) trying to cover something up. The person we are talking about here is the Vice President of PACE, JG Thayne!!!

Now, my question is this: What the heck is going on in Pittsburgh? Is someone is trying to 'frame' the Atari Elite and pin this entire piracy issue on that group when they can be no more accountable for the piracy problems than PACE?! If PACE was aware that their Vice President goofed, and I am told that even Bruce Markey, the President of PACE was aware of this situation, then why have they turned this event up side down and claimed that it was an Atari Elite member who made this comment???!!!

Does it not seem a little strange that this story got twisted by 4 different people, all of which are members of PACE and want nothing more than to see the 'other group' go down in flames? Interesting is it not?

In closing, I feel that I must make a statement here to all of the Atari people who have been following the events of April 28-29. Do not be too quick to make a decision to condemn the Atari Elite group in Pittsburgh until you have filtered through all of the facts and fantasies! It appears that a lot that we are seeing message wise coming from PACE may be a bunch of rubbish brought about to try to end a cross town rivalry that has been going on now for 5 years! Time will tell, however, and we will soon see who really is responsible for the deplorable situation in this city.

Sincerely,

NAME WITHELD AT WRITER'S REQUEST
Donora, Pennsylvania

EDITOR NOTE:

Last week, we carried a letter by Mark Spires from At Your Service of Pittsburgh. And even though reader response was rather light we took extreme exception to certain of his remarks concerning Bob Brodie's decision to NOT give away the designated show prizes.

STReport is in full agreement with Brodie's decision and now, in light of the "Spires - At Your Service" letter, we feel strongly that the "Pittsburgh wars" between the two usergroups, who by the way, have many of the same folks members of BOTH GROUPS leaves a great many more unanswered questions. For example, the actual vendors present and the statement that there were 77 some odd tables set up. Or the guarantee made to certain vendors that this was a "buying" crowd. And then there is the tablecloths and drapes, were they really donated by the State Hospital?

Brodie was quite correct in holding back the hardware. And as of this time, we recommend that the two usergroups in PGH get together and put an end to this petty rivalry and backstabbing contest. They must resolve their differences and put an end to the creepo politics. If these two groups really have the PGH users best interests at heart they will resolve this nonsense ASAP. That includes the shutting down of the rental library.

> Stock Market ~ CPU NewsWireâ € Watchin' the Sheckles Grow!
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THE TICKERTAPE
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by Michael Arthur

Concept by Glenn Gorman

The price of Atari Stock stayed the same on Monday, and went down 1/4 of a point on Tuesday. On Wednesday, Atari Stock fell by 3/8 of a point, and stayed the same on Thursday. On Friday, it went up 1/8 of a point.

Finishing up the week at 5 1/8 points, the price of Atari Stock went down 1/2 of a point since the last report.

Apple Stock was up 2 5/8 points from Friday, May 7, 1990.
Commodore Stock was up 1 point from 5/7/90.
IBM Stock was up 3 1/2 points from 5/7/90.

Stock Report for Week of 5/7/90 to 5/11/90

STock Reprt	Monday		Tuesday		Wednesday		Thursday		Friday	
	Last	Chg.	Last	Chg.	Last	Chg.	Last	Chg.	Last	Chg.
Atari	5 5/8	----	5 3/8	- 1/4	5	-3/8	5	----	5 1/8	+ 1/8
									85,300 Sls	
CBM	7 1/8	+ 3/8	7	- 1/8	7 3/8	+3/8	7 3/8	----	7 3/4	+ 3/8
									129,600 Sls	
Apple	41 1/2		41 3/4	+ 1/4	41 3/8	+1/8	41 3/8	----	42 5/8	+1 1/4
		+1 1/2							1,921,800 Sls	
IBM	110 1/2	---	110 3/4	+3/4	111 1/4		112 3/8		114	+ 1 5/8
						+1/2		+1 1/8	2,547,300 Sls	

'Sls' refers to the # of stock shares that were traded that day.

'CBM' refers to Commodore Corporation.

'-----' means that the stock's price did not change for the day.

> ATARI '89 REPORT STR FOCUSâ € ... Worthwhile reading
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FROM THE PRESIDENT
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ATARI CORP. 1989 ANNUAL REPORT
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excerpts from..

"Atari Corp. is one of the largest manufacturers of personal computers and video game systems in the world. Through the creative application of advanced technologies, the company offers its customers a wide range of computing power and entertainment. Among the Company's latest products are the palmtop Portfolio computer and the hand-held Lynx color video game system. In addition to these revolutionary portables, Atari features a variety of powerful desktop systems including the enhanced version STe and TT030 computers, a range of PC compatible computers, and the established

2600 and 7800 game systems. The Company also produces peripherals, accessories, and an expanding library of computer and video game software that is sold in almost every major country in the world. Atari is a multi-national company employing approximately 1400 people throughout the world. Corporate Headquarters, including computer and video game product design, are located in Sunnyvale, California. R & D centers are located in the United States, England, Japan, and Taiwan. Manufacturing is carried out in Taiwan, Japan and at various subcontractors in the far east. The Company operates through wholly owned subsidiaries in Australia, Austria, Belgium, Canada, Denmark, France, Germany, Hong Kong, Israel, Italy, Japan, Mexico, the Netherlands, Norway, Spain, Sweden, Switzerland, Taiwan, the United Kingdom and the United States."

TO OUR SHAREHOLDERS

"The Year 1989 was a productive one for Atari Corporation. We set out in the beginning of the year with the objective of disposing of The Federated Group and subsequent to year end, Atari consummated the sale of the majority of its Southern California leasehold interests. No additional losses are anticipated on final disposition of Federated and our focus is on our primary objective, Atari's core business.

For the year ended December 31, 1989;

Sales: 423.6 million Income: 4.0 million

For the year ended December 31, 1988;

Sales: 452.2 million Income: 39.4 million

The decline in total sales for 1989 as compared to 1988 can be attributed to the decline in the United States of our traditional video game line. European markets continue to out-perform all other markets in both computers and video games. In addition to witnessing the disposition of an extraneous business segment, Atari introduced a new generation of products: two revolutionary handheld machines - the Lynx and Video Game System and the Portfolio computer - and the new ST an enhanced member of the Atari ST family."

IMAGINATIVE DIRECTIONS

"In the fall of 1989, Atari launched the first full featured MS-DOS command compatible portable palmtop computer - the Atari Portfolio. The Advent of Portfolio ushered in an entirely new dimension in computer practicality. It operates on 3 'AA' batteries with an approximate life of 4-6 weeks of regular use. The Portfolio provides its owner all of the power of a computer anywhere - on a plane, a classroom or in hotel room. The system's credit card sized memory and program cards take the place of disks allowing the user to store data and enter programs. A number of Portfolio programs soon to be released include: DOS Utilities, Finance, GW BASIC, as well as a spell checker, a math/engineering program, a modem package and a chess game with many others to come. The growing popularity of this new product and the concept of portable computer technology is an area we intend to pursue. Projects are underway to develop even more elaborate portable systems.

VIDEO GAMES

The new portable Atari Lynx system represents a major leap in video-game technology. It has a unique full color, high-resolution graphics LCD which allows for the best arcade hits to be produced for the Lynx. Lynx was recognized as a revolutionary achievement by the trade when it was first introduced at the Consumer Electronics Show in Chicago last summer. Shipments began just prior to Christmas in New York City and Tokyo and these two test markets were sold out. The Lynx features a full color liquid crystal display driven by a 16 bit graphics engine. A palette of 4096 colors permits as many as 16 colors to appear on screen at once creating extraordinary graphics. The system also has a 32 bit audio processor with 4 channel sound to enhance game action. 'AA' batteries enable the game player to enjoy arcade excitement on the beach, in the schoolyard and in the car. The unit comes with a headset jack, an AC adapter and a Comlynx cable so that, depending upon the game, as many as 16 players can compete with one another. Software support for the new Lynx has been equally impressive. In less than four months, six top game titles were released. The most recent, Gauntlet - The Third Encounter is a 1,2,3 or 4 player game. The future for the Lynx product category is extremely bright. We recognize that the success of this important product depends chiefly on software. I am pleased to say that our video game software group is currently producing exciting titles, which include some arcade hits. As many as 25 new games are planned for release by Christmas and new hardware peripherals are presently under development.

BUILDING FOR THE YEAR AHEAD

In addition to our portable Lynx and Portfolio systems, new product development for our flagship ST line is continuing. Volume shipments of the STe, an enhanced general application system, began during the fourth quarter. In 1989 we also introduced the versatile TT030, a 68030-based computer which will run the TOS operating system in the native mode, as well as having the option to run UNIX V3.1. Shipments of the TT030 will start during the second half of 1990, while shipments of the Stacy, an ST compatible laptop, began at the end of the first quarter of 1990. As we enter a new year, our biggest opportunity still awaits us. Earlier plans to enter the US market were impeded by a lack of product availability caused by the DRAM situation. With this and other interferences behind us, we are eagerly preparing for the American market. A multi-million dollar advertising plan for both Atari video games and computer systems is now being reviewed and our sales force is being prepared to cover this vast and lucrative arena. We also view the recent changes in Eastern Europe with great optimism. We plan to use our strong European presence to enhance our position in this new marketplace. With increased business comes the need for larger facilities. Our German subsidiary is now in the process of building its own 110 thousand square foot office-warehouse facility in Schwalbach, a suburb of Frankfurt. I want to extend my thanks to our colleagues at Atari France, who last fall suffered a devastating fire which began in an adjacent building and spread to the Atari facility. Despite the total destruction of their, our French team salvage what records they could, and continued business in a speedy and efficient manner. They have relocated to a new Atari-owned, thirty-three thousand square foot office-warehouse complex. I also wish to extend my appreciation to our many customers, shareholders, suppliers, employees and enthusiastic usergroups everywhere, for their support and encouragement. I am confident that in the year ahead, we will continue to gain market share in our important sectors, as well as innovate and bring exciting products to our customers.

THE ATARI PC LINE

Early in the year Atari began to ship the first significant volumes of the 80286-based PC compatible, the PC4. Atari is now shipping a range of PC compatibles, and during the second quarter of 1990, the company will add the ABC386SX to this family. The ABC386SX is Atari's entry into the field of affordable 32bit compatible PCs. Built around the 386SX high performance microprocessor, the ABC386SX has a clock rate of 16MHz. Its five display modes include EGA, CGA, MDA, HGC, and VGA, providing a range of resolutions from 320x200 color to 720x350 monochrome. With one full megabyte of RAM, expandable to 8 Mbytes on the motherboard, the ABC386SX has all the memory needed to run today's sophisticated software applications. The ABC386SX comes standard with 3 1/2 inch 1.44Mbyte floppy disk drive and/or a 5 1/4 inch 1.2 Mbyte floppy disk drive and a hard disk drive. The system also has serial and parallel ports, an analog video port and 3 AT/XT expansion slots. The unit has 101 key AT style keyboard.

MORE ST POWER

The basic ST system has been enhanced. In addition to all of the proven features of the original model, the new STe has an increased palette of 4096 colors. Its sound has also been expanded by the addition of two digital stereo audio outputs. The two stereo outputs allow users to play digitized samples directly from their computer without any costly synthesizer equipment. The STe has been made into a very powerful game system as well. It can accommodate up to 6 joysticks, or 4 paddles, or a light gun. Horizontal and vertical scrolling combined with its new enhanced digitized sound, and extensive color palette, provides realistic arcade excitement. As a broad application, affordable business tool, the STe has made a very successful entry into Atari's established European markets and is planned for the US market in the second quarter.

TT030 - THE POWER TRAIN

The 68030-based TT030 is the top-of-the-line systems Atari begins the 90s. Previewed during the last quarter of 1989, this 16MHz powerplant is designed to be a fully functional workstation at PC prices. Incorporating Atari's own expanded Rainbow TOS operating system, the TT will also run the industry-standard UNIX V3.1 operating system with X-Windows and an easy-to-use user interface. The new unit provides six video display modes including 1280x960 high resolution monochrome. Since the system also features enhanced color graphics and has a palette of 4096 colors, its 320x480 mode is able to create superb TV-like images with up to 256 colors on the screen at one time. Among the many built-in highlights of the TT030 is an industry standard VMEbus. This allows the TT030 to accommodate such local area network standards as Ethernet. A complete range of peripherals will be available to support the system.

STACY - THE PORTABLE ST

For people on the go, the Atari Stacy puts all the power of Atari's popular ST into a self-contained, portable package. Available in a variety of MEGA configurations, the Stacy includes built-in floppy and hard drives, plus all of the standard modem, printer and midi ports found on the ST. Beneath its top cover is a large backlit 640x400 high resolution super twist liquid crystal display. In addition to its full sized keyboard, the Stacy has an integrated Trak Ball controller. The unit features Atari's latest Rainbow TOS operating system and is driven by the Motorola(tm) 68000 microprocessor.

MUSIC AND MOTION PICTURES

The unique combination of Atari's precision operating system, its built-in MIDI ports, ease-of-use, and affordability, has made the Atari computer an essential instrument in the music and movie industry. For Dave Grusin 1989 Oscar winner for his musical score in the Milagro Beanfield War, the Atari ST is a major asset in his work. Having also earned three Grammys including one for the Fabulous Baker Boys, Grusin admits that, "the ST was indispensable in editing the vocals for both the motion picture and the soundtrack. Scott Gershon, sound effects editor for Oliver Stone's Born on the Fourth of July, agrees. His Atari ST was used to edit the audio for this major motion picture. Other recent pictures on Atari's marquee are Tri-Star Pictures' Glory and Steel Magnolias and Honey I Shrunk the Kids from Walt Disney Studios. A partial of popular bands and artists who rely upon their Atari ST systems today and are rapidly discovering the added convenience of the new portable Stacy include: Beach Boys, Blue Oyster Cult, Dire Straits, Earth, Wind, and Fire, Fleetwood Mac, Peter Gabriel, Debbie Gibson, The Go Gos, Dave Grusin, Hall and Oats, Ice House, Madonna, Dave Mason, Midnight Oil, Miami Sound Machine, The Moody Blues, New Kids on the Block, Donny Osmond, The Pointer Sisters, Lee Ritenour, Supertramp, Tangerine Dream, 38 Special, Ultravox, Van Halen, Whitesnake, Steve Winwood, and Joseph Zawinual.

> LOOSING GROUND! STR OnLineâ € Longtime, loyal users getting nervous
=====

CTSY COMPUSERVE

Read action !
20495 S17/Community Square
18-May-90 02:09:46
Sb: #20463-Atari or Amiga
Fm: Bob Retelle 71550,3312
To: ST Informer 70007,3615 (X)

Oh, I wouldn't mind having an STe, but not for those reasons.. The STe STILL uses "CPU driven" sound... that is, to make any kind of sound,

whether it's from the built-in Yamaha chip or from the DAC converters, it STILL requires the ST's CPU to be involved... and if it's making sound, it can't be doing anything else...

The Amiga on the other hand has a "co-processor" chip that does all the work of making sound... you program it, and it runs independantly of the CPU.. also, while the digitized sound of the STe is nice, it requires *immense* amounts of memory to store the digitized sounds.. the Amiga can use EITHER digitized sound, or programmed sound (which takes far less memory, but can sound almost as good).

No, the Amiga is still far superior to the STe in sound.. As for "plug and play", the Amiga is *designed* with memory expansion in mind.. even the original Amiga 1000 had a connector for expansion memory to be just plugged in... it's taken *FIVE YEARS* for Atari to come around to "plug and play"...

The STe still has the limitation of 4 "bit-planes".. that means it STILL cannot display more than 16 colors in *low resolution* at one time... sure, you can choose from 4096 different shades, but only *16* on the screen at one time... the Amiga has 5 bit-planes, and has had them from the start.. the "Hold and Modify" modes, which are *built-in* allow some very nice graphics with a stock machine...

No, I don't have an Amiga, and probably never will... I like my ST just fine.. but Atari has NOT given us an "Amiga killer" with the STe...

Just like the Mega was, the STe is only a minimal improvement over the 1985 technology of the original ST...

BobR

20496 S8/Hot Topics
18-May-90 02:19:29
Sb: #20459-Atari dead?
Fm: Bob Retelle 71550,3312
To: SYSOP*Keith Joins 76702,375

Sigh... State Street Computers in Ann Arbor is holding its final auction this Saturday... everything out to the walls goes... that means the last Atari dealer in the Ann Arbor area is history...

Also, Basic Bits 'n Bytes on Ford Road in Westland is gone... I bought most of my ST hardware there, and I'll miss them...!

Atari Corp keeps telling us that they're signing up dealers by the hundreds..

but... how many of us have seen any of these new dealers..?

On the other hand, how many of us have seen our local dealers driven into bankruptcy or disillusionment by the games Atari has played...?

BobR

ctsy GENie

Category 14, Topic 3
Message 101 Thu May 17, 1990

S.COLLER [Steve]

at 20:28 CDT

I don't mean to rain on anyone's parade, but given the realities of Atari dealers and dvelopeers qualifying for the endangered species list and the fact that as of close of business yesertday(yesterday) 5/16/90 Atari stock was 4 7/8, perhaps Atari has already left the US market and we just refuse to acknowlwdge this.

The Amiga 3000 is on the front of Byte and still most of the US doesn't even know Atari is still in business. If Atari still plans on doing something in the US market other than sell the Lynx and Portfolio, they had better pull out all the stops and get with it. It is really hard to believe that the same guy that use to say "business is war" when he ran Commodore is in any way involved with Atari.

CES or Comdex; Atari better make an impact at which ever show thay are going to.

Steve

Category 14, Topic 3

Message 102 Thu May 17, 1990

JACK.D at 23:02 EDT

Actually, I find it much easier to keep CES and COMDEX straight in my mind by just remembering that it's CES where the X-Rated videos are being autographed! <grin!> Something about that reminds me of the "prestige" involved with the "Toys 'n Games Show"...while IBM, DEC, Sun, and other "non-prestigious" developers go to COMDEX and show their wares to the likes of the Wall St. Journal, the NY Times, InfoWorld, Byte, etc.... not to mention all of those dealers who "only sell computers"...NOT teddy bears, refrigerators, and VCRs...

Yep...I would suspect that Atari will ALWAYS be a "small company", what with such thinking.

Sigh.

> AUA NEWSBRIEFS STR OnLineâ ¢
=====

ATARI USERS ASSOCIATION NEWS

ATARI USERS ASSOCIATION NEWSBRIEFS
=====

by Derek C. Signorini

Now that the smoke is beginning to clear and after everyone has pointed the finger at the other guy, we are beginning to see the facts begin to surface concerning the Pittsburgh show. From what I have seen and heard, I am shocked to find that those who I felt were being up front and honest with me were not, and those who I thought I could trust, I can not.

As you read in last few issues, there are those whose sole purpose in life is to damage the reputation of others. It saddens me that all of this unrest is taking place in the Atari Community and I am sure that most of you feel the same. No one wants to see ANY ST user group cease to exist! This would be a serious blow to the ST userbase! The ST community needs as much support as it can acquire and the loss of even one group will cause the strong chain we are creating begin to rust. One thing is for sure, however, the facts will come out. The truth will be known. That is the most important outcome here, that the real perpetrators behind the Pittsburgh show controversy will be known. That is the power of the press!

At any rate, we must put this all behind us and wait to see what the outcome will be. My apologies to anyone showing up at the AUA conference this past sunday evening only to find that there was no conference. We will resume our online conference Sunday, May 20th at 9:00pm EST and will hold the conference every Sunday thereafter, same time, same place.

Due to the low attendance at the Pittsburgh show, the AUA was left with several extra copies of the AUA NewsBriefs newsletter. Instead of letting them go to waste, we will be sending several copies to each of the User groups that we have listed in our small directory. If you would like to receive sample copies of the NewsBriefs for your user group, then please send us \$3.00US (to cover postage) and an approximate quantity request to the AUA address below and we will mail them to your group so that your members can enjoy the newsletter! Also in the request, please include the name of your group's president and any other vital information such as BBS number and meeting dates.

After receiving many requests, we have elected to offer sample packs of the AUA NewsBriefs for those people who would like to see the AUA product before joining. Unfortunately, we can not afford to do this for free, so we are asking only \$2.00 for the disk and newsletter. This covers our cost of material and mailing and we feel that many more people will join the AUA given the opportunity to preview the newsletters first hand. If you are interested in seeing the newsletters, then please write to us requesting the sample pack.

News from within the AUA. We are currently working on a press release that we will distribute to the magazines, vendors, developers and user groups. We estimate that only 5% of the ST community has heard of the AUA and we must increase this figure in order to gain support. 99% of our current members own modems and have joined the AUA after hearing of it from online services and BBS's. By distributing information to usergroups, we will be able to spread word of the AUA even deeper into the community. Another interesting statistic that we have calculated, the average age of our members in the AUA is 29. This is surprisingly high and I can probably attribute this to members having owned 8-bit computers in the past and have moved up to the ST. While the AUA membership is mostly male in gender, we have quite a few females, and we hope to

increase that figure as well!

As mentioned in my last column, the AUA will be publishing its own disk based newsletter. We have named the newsletter (drum role please...): The AUA NewsBriefs Disk Magazine. This newsletter will be more AUA oriented and will hopefully offer information that you will find useful. Submissions for the first issue of the AUA NewsBriefs Disk Magazine will be May 31, 1990. If you have articles, letters, comments, or any other contribution, we must have it on or before this date. You can email the information to me on GENie, at node #350 (Bounty BBS), or drop it in the mail to the P.O. box. We will accept printed material in the latter case, and our diligent secretary will gladly type the information to ascii. (My wife still does not know about this task I just assigned her...) The deadline for submissions to the second AUA NewsBriefs Newsletter will be July 31, 1990.

That just about wraps it up for this week. In my next column I hope to bring you some more AUA statistics, and until then, I leave you with a request. SUPPORT SHAREWARE! It is the life of the Atari ST!

The Atari Users Association
P.O. Box 123
Canonsburg, PA 15317

> TRACKER UPDATE! STR InfoFileâ €First class Support
=====

Step Ahead Software is pleased to announce the availability of v2.02 of Tracker/ST, the premier mailing list/mail merge/person tracking software for the Atari ST. This update is FREE to all registered owners of Tracker/ST.

"This is a GREAT program and it has cut my mail list time by over half...Just wish I would have had this program a couple of years back."

--B.R.G., Texas

CHANGES IN THIS VERSION OF TRACKER/ST INCLUDE

- Elimination of two small bugs reported by our users.
- Addition of the ability to search by Company name while in the QuickLetter area of Tracker/ST.
- Additional filter command allows the user to print a report, label or mail merge to an alphabetical range of _Companies_. Previously, the alphabetical range ("Everyone between the letters of C and G") could be performed only on last names.

(Of course, this version of Tracker/ST still has all its other powerful filtering commands, such as selecting by category, rank, company, state, zip code range, keyword, date, source, country, etc, etc, etc..!)

--A slight change to the automatic mail-merge building process for more pleasant page layout.

NOTE: This upgrade is FREE to all REGISTERED USERS

Simply send your original Tracker/ST disk to:

Step Ahead Software, Inc.
496-A Hudson Street, Suite F39
New York City, NY 10014
212-627-5830

Registered owners of Tracker/ST who have a GENie account may receive their upgrade by GENie e-mail. Please send a note to NEVIN-S on GENie (or drop a public message in Category 6, Topic 23) if you would like your upgrade sent to you by e-mail. (We MUST have your registration card of file for you to be eligible for e-mail upgrading.)

"I am really impressed with the excellent service
your company is offering."

--J.M., Texas

If you have not already done so, please SEND IN YOUR REGISTRATION CARD. We are preparing the first issue of our Quarterly Newsletter and we can't send you a copy if we don't know who you are..!

Nevin Shalit
Step Ahead Software, Inc.

> CIS FOLIO CONTEST STR Spotlightâ € A Portfolio Contest on CIS....
=====

From May 15th to July 15th, 1990, the Atari Portfolio Forum will sponsor a Programming Contest with the winners receiving the prizes listed below. One winner will be selected per individual category along with a runner up. Winners will be selected from the files uploaded into Library 16, "CONTEST LIBRARY" of the Atari Portfolio Forum. The files submitted for the contest must have the specific categories for entry listed in the file description. Persons may enter and win in more than one category, however a program can only be entered into one category. Although the author shall retain any copyrights to their entry, all winning files shall be considered 'publicly distributable files' and may be made available for downloading from CompuServe. The contest categories and prizes are listed below.

Categories:

The Best Entertainment Program:

any game program written for the PORTFOLIO Computer.

The Best Database Program:

any program that can classify and sort information by any number of parameters and presents it in a useable manner. This category will include 'to-do listers' and even outliners.

The Best Utility/Application Program:

any program that helps make your PORTFOLIO more useful. This includes utility programs or specific application programs.

Prizes:

The winner in each category will receive the following prizes:

\$100 connect time credit from CompuServe to be applied to the CompuServe account that was used to upload the winning entry.

DOS UTILITIES ROM Card for the PORTFOLIO
donated by Atari Corporation (Retail Value \$80).

The DOS UTILITIES is a ROM card based collection of powerful utility functions for Atari Portfolio users. Over 78k of versatile files are permanently available on a card which never requires a battery replacement. The 22 utilities are of particular value for those who write and use batch files with popular commands known in other MS-DOS environments and some new ones. Each function offers extended features for using the Portfolio and enables users to customize their system so it works better for them. Also, included is a 110-page manual with descriptions, syntax, and examples for each command.

Leather PCpouch donated by Caseworks, Inc. (Retail Value \$50)

This handsome glove leather carrying case is designed to protect the Portfolio from the rigors of day to day travel. It is specially equipped with an elastic pocket to hold the computer plus elastic bands for inserting 3 AA batteries. The case contains compartments to hold three memory cards, all in a size not much bigger than the Portfolio itself. A special 1/2" foam lining helps ensure that the computer and accessories are kept cool if left in direct sunlight. All sides are foam fitted to give its contents maximum protection from impact.

The runner up in each category will receive;

\$50.00 worth of connect time credit from CompuServe.

The staff of the Atari Portfolio Forum will select the winners, which will be announced on:

August 1st, 1990.

RULES:

1. The Atari Portfolio Forum Programming Contest is a skill- based contest for any member who has properly registered and joined the Atari Portfolio Forum on the CompuServe Information Service. Participation in this contest is open to residents of the United States. Employees of CompuServe Incorporated, H&R Block, Egret Associates Inc., CompuServe Information Providers, SysOps, GameOps, their affiliates, subsidiaries, advertising agencies, and immediate families are ineligible to win prizes. This contest may be discontinued at any time at the sole discretion of CompuServe Incorporated. The contest is subject to all local, state and federal regulations and is void where prohibited by law. All taxes are the sole responsibility of the winners. All files must be uploaded into the designated library. The categories in which the files are being entered should be included in the file's description.
 2. From Tuesday, May 15th at 12:01 AM EST to Sunday, July 15th 11:59 EST members who meet the above eligibility requirements can enter the contest. The files should be uploaded into Library 16, "Contest Library," of the Atari Portfolio Forum. The specific categories for entry must be designated in the file's description. One winner will be named per category.
 3. The Primary Forum Administrator and the Assistant Forum Administrators of the Atari Portfolio Forum will judge the entries. The decision of the judges is final and not reviewable by any other person, agency, or tribunal. Winners will be notified by CompuServe Mail on or about August 1st, 1990, and their names will be published online in the Atari Portfolio Forum.
 4. This contest and prizes may be publicized outside the CompuServe Information Service. No prize may be exchanged, substituted, modified, or redeemed for cash. One prize per family, individual, household, or User ID number. Prizes are not transferable. Prizes won by entrants under the age of 18 will be awarded to the winner's parent or legal guardian. All prizes will be awarded and mailed to the winner's address contained in CompuServe's online records. By acceptance of their prizes, winners consent to publication of their names, likenesses, and/or User ID without further compensation for advertising or promotional purposes. Prizes not claimed after 21 days of the day of notification, for any reason whatsoever, will be forfeited. Prize winners may be required to execute an affidavit of eligibility and publicity release within 21 days of notification. Non-compliance within this time period will result in disqualification and an alternate winner will be selected if possible.
 5. Prize winners will be required to provide CompuServe with their Social Security numbers by completing Federal Tax Form W-9 which will be mailed to all winners. Non-compliance within 21 days of receipt of the form will result in disqualification. The value of the prizes won in the Atari Portfolio Forum Programming Contest will be reported by CompuServe and other prize providers on Federal Tax Form 1099 for each individual awarded a total retail value of at least \$600.00 in prizes during the tax year.
-

> MT C-Shell STR Tech Notesâ€¢ RTX device driver for a TTY device
=====

from Usenet...

I received enough requests for this via mail that I thought I would post it.

These are the specs. for an MT C-Shell compatible RTX device driver for a TTY (login) device. This defines the rules for doing stuff like setting DTR, waiting for DCD, etc. in a device independent fashion, using the device driver d_cntrl() function.

RTX does not specify the details of what d_cntrl() should do. This defines what MT C-Shell expects of a TTY device driver which is to be used for MT C-Shell logins (getty) and UUCP (uucico). This document describes the interface from the device driver writers perspective. To use it from the application's perspective, just turn things around.

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MT C-Shell TTY Driver Documentaion

Confidential
Copyright (c) 1988
Beckemeyer Devleopment Tools

MT C-Shell tty drivers can support d_cntrl() functions if desired. They will work as a simple "raw" uncontrolled tty device if the driver simply returns 0L to all d_cntrl calls.

If the driver implements d_cntrl(), the format for MT C-Shell drivers is that a termio data structure is passed to the driver:

```
struct termio {
    int t_cmd;
    int t_baud;
    int t_mask;
    int t_flags;
};
```

The t_cmd element is used to determine the control function which may be:

```
/* tty commands */
#define TTY_CONF      1
#define TTY_OPEN      2
#define TTY_CLOSE     3
#define TTY_DCDWAIT   4
#define TTY_STAT      5
```

The TTY_CONF is used to set the baud rate and rs-232 params,

it uses the `t_baud` and `t_mask` fields of the `termio` struct as in the `Rscnf()` GEMDOS call. E.g. to set the baud to 9600 without affecting the mask, an application would use:

```
struct termio termio;

termio.t_cmd = TTY_CONF;
termio.t_baud = 1;
termio.t_mask = -1;
d_cntrl(dev, &termio);
```

`TTY_OPEN` is used to open the line for outgoing calls by programs like `UUCP`. This should fail with a non-zero value if the line is currently opened by another process.

`TTY_DCDWAIT` is used to by applications (e.g. `getty`) to wait for an incoming call. The process should be suspended until an incoming call is received and the line is available.

`TTY_CLOSE` ends use of the `tty` line by the application. The `RTS` line should be lowered for a few seconds and then raised to reset the modem; the line should be marked as clear.

`TTY_STAT` is used by applications to detect carrier. The call should return `-32` iff carrier is **not** present.

If all `d_cntrl()` calls simply return 0, the system will work. The implementation of the above commands depends on the use of the device and its line. Behavior with modems connected may need to be different than with 3-wire terminals in order for it to work. You should be able to test the basic driver functionality by implementing a simple `d_cntrl()` which returns 0 first, before attempting to implement all of the `tty` control functions.

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The idea is that the application would use either `TTY_OPEN` or `TTY_DCDWAIT` to access the line. When finished, `TTY_CLOSE` should be used. `TTY_STAT` can be used to determine the status of DCD.

If `TTY_OPEN` is used then the status of DCD is "don't care" at the driver level -- the driver will not react to changes in DCD (similar to `UN*X NOHUP`). This is also the situation when the line is used without any `TTY_OPEN` or `TTY_DCDWAIT` `d_cntrl()`.

If `TTY_DCDWAIT` is used, the processes using the `TTY` will be killed when carrier goes away (hangup). This happens in the driver. The driver doesn't have to implement this hangup handling, in which case `TTY_DCDWAIT` acts just like `TTY_OPEN`.

What follows is some sample code that uses the `d_cntrl` calls. The `hangup()` routine does the close. The `opentty()` opens the line and sets the baud/parity.

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```
static int xbaud, xdev;
```

```

hangup()
{
    struct termio termio;

    termio.t_cmd = TTY_CLOSE;
    d_cntrl(xdev, &termio);
}

int bdtbl[] = {
    19200,
    9600,
    4800,
    3600,
    2400,
    2000,
    1800,
    1200,
    600,
    300,
    200,
    150,
    134,
    110,
    75,
    50,
    0
};

setbaud(baud)
int baud;
{
    int *b;
    struct termio termio;

    /* set the baud rate */
    for (xbaud = 0, b = bdtbl; *b; b++, xbaud++)
        if (*b == baud) {
            termio.t_cmd = TTY_CONF;
            termio.t_baud = xbaud;
            termio.t_mask = -1;
            termio.t_flags = -1;
            d_cntrl(xdev, &termio);
            return(0);
        }
    return(-1);
}

/* set parity to odd, even, or none based on argument as follows:
 *  n == 0    no parity
 *  n > 0     even parity
 *  n < 0     odd parity
 */
setparity(n)
int n;
{
    int ucr;
    struct termio termio;

```

```

/* div by 16, 1 stop bit */
ucr = 0x88;
/* parity means 7-bit */
if (n)
    /* n > 0 means even */
    ucr |= (n > 0 ? 0x26 : 0x24);
termio.t_cmd = TTY_CONF;
termio.t_baud = xbaud;
termio.t_mask = ucr;
termio.t_flags = -1;
d_cntrl(xdev, &termio);
}

opentty(ttynam, baud, ttycmd)
char *ttynam;
int baud, ttycmd;
{
    int fd;
    struct termio termio;

    if ((fd = Fopen(ttynam, 2)) < 0) {
        DEBUG(9, "cannot open %s\n", ttynam);
        return(-1);
    }
    xdev = Ftype(fd);
    Fclose(fd);
    if (xdev < 0 || xdev >= 16) {
        DEBUG(9, "%s: not a tty device\n", ttynam);
        return(-1);
    }
    /* open the device if required */
    if (ttycmd > 0) {
        termio.t_cmd = ttycmd;
        if (d_cntrl(xdev, &termio)) {
            DEBUG(9, "tty %s in use\n", ttynam);
            return(-1);
        }
    }
    /* set the baud rate */
    if (setbaud(baud) != 0 && DEBUG_LEVEL(9)) {
        printf("bad baud rate: %d\n", baud);
        return(-1);
    }
    return(0);
}

```

David Beckemeyer (david@bdt.UUCP) | "I'll forgive you Dad... If you have
 Beckemeyer Development Tools | a breath mint."
 P.O. Box 21575, Oakland, CA 94620 | Bart - "The Simpsons"
 UUCP: {uunet,ucbvax}!unisoft!bdt!david |

> MICRO RTX STR Tech Notesâ € ...RTX is a Real-Time Executive.
=====

A BRIEF DESCRIPTION OF MICRO RTX =====

by Dave Beckemeyer

In response to all the requests for information about Micro RTX, I began working on a document for eventual posting. Before I finished it, I realized that it was rapidly becoming a very large book. I therefore have prepared this summary.

There is a lot to RTX and there is a lot of general Atari ST knowledge and multitasking operating system knowledge that has to be acquired before one can even begin to learn RTX in detail.

This document describes only briefly the Atari ST system architecture and it barely scratches the surface of RTX and multitasking on the ST. Unfortunately, it just isn't possible to fully describe it in a posting.

INTRODUCTION

RTX is a Real-Time Executive. RTX is accessed with system calls, like the standard TOS/GEMDOS/BIOS services. It is not a command shell and it doesn't have any "commands" or user interface intrinsic to the kernel. It is a system call handler.

Atari ST programs make use of the TOS operating system via "system calls". The whole TOS operating system has GEM calls (several different types), GEMDOS calls, BIOS calls, XBIOS calls, and LINE-A (graphics) calls.

After Micro RTX is installed, it intercepts and interprets the GEMDOS, BIOS, and XBIOS calls for all programs. Micro RTX also implements several RTX-only calls and GEMDOS extensions.

PROGRAMMING OVERVIEW

Programs can call TOS directly. In C, this is done with the "osbind.h" macros like Fopen, Dgetdrv, and Rwabs. These macros actually produce code that cause a software interrupt, or trap, which jumps into the ROM code. The application can also use library routines provided by the compiler manufacturer (e.g. fopen, or printf). These library routines then perform the TOS system calls on behalf of the calling program. For example, the fopen C library routine will eventually use the Fopen system call to open a file.

It must be understood that there are important differences between library routines and system calls. The code that implements a library routine is contained within the application program (it is linked in).

There is a separate copy of the printf handler linked into every C program that uses printf. These library routines may also "cook" the programmer's input arguments (e.g. fopen might treat certain file names as a special case), before they call the actual operating system. It depends on the compiler manufacture's particular idea of "correct" implementation.

In contrast, the code that implements system calls is normally in the TOS ROMs. There is only one Fopen handler; all programs use the same one. When RTX loads, it replaces the system call handlers with RTX RAM resident versions. Therefore, there are no changes to the application. The only difference is a new system call handler. This is one of the really nice things about RTX. While RTX does add new system calls, it is optional whether a program wants to use them or not.

Programs using only standard TOS calls operate as usual. Programs that require special functions that are only available with the RTX system calls, (e.g. interprocess communication, or multi-tasking) can implement only the RTX calls that are needed.

This means that there are far fewer new operating system calls to learn. Only the extended features that were not built into TOS need to be learned; all the features you already know work substantially the same, with only perhaps some new options added.

It also means that standard program development practices can be used to develop RTX applications. The applications can even be developed with compile-time or run-time options, to run with or without RTX installed. Any language capable of producing system calls can be used to develop RTX programs: C, Pascal, Modula, or Assembler.

In C, RTX calls look like regular function calls. In assembler, they are trap instructions (just like the GEMDOS, BIOS, and XBIOS calls).

OVERVIEW OF RTX SYSTEM CALLS

RTX implements two separate types of System Calls:

- Stand-Alone Real-Time Services
- TOS compatible services and TOS Extensions

Both types of system calls may be used in the same application.

The RTX Real-Time kernel provides Real-Time multitasking services similar to many popular Real-Time systems, such as VRTX, pSOS, etc. These commercial systems sell for thousands of dollars. Micro RTX compares very well with these systems even at its low price. There's no way to give a complete description of what a real-time operating system is, and what one is used for here. For those that know what it is, little more needs to be said; for those that don't know what it is, don't worry about it. For those interested, we have lots of nice brochures that describe the real-time properties of Micro RTX for commercial Real-time applications which we'd be happy to send you.

RTX is designed to be easy to use. The calls are simple and general. The calling conventions are consistent and the chance for errors and confusion has been reduced. The basic philosophy is that a few very

general building blocks can be put together lots of different ways to accomplish lots of different goals.

This has the drawback that the application developer must have the vision to know how to put the pieces together effectively. When a developer needs function X, and RTX has no X, the developer needs to be able to build X from what RTX does have. It's analogous to UNIX users who know what you can do with pipes and those that don't (so somebody has to write them a shell script that does exactly what they want with no pipes).

Configuration relies on a small number of passive declarations; RTX is mostly self-configuring.

THE PROCESS

A process is an entity in the system. The terms process and program are NOT the same thing. A program is a file that contains code and data that can be loaded into memory and executed. A process is a running entity, or "being" in the system. The code loaded in from one program can become a process when it's executed; a single program may even become several processes when it executes.

In Micro RTX, a process is the atomic (or basic) unit of CPU execution. While several processes may be "running" in the system, the CPU can only execute one process at any one instant of time. The processes appear to execute at the same time because of process switching. A process switch can occur for several reasons. Each process has a state associated with it.

The basic states are running, sleeping, and ready-to-run.

With RTX, the running state means the CPU is executing the process. There is only one running process in the system. A sleeping process is one that is waiting for something other than the CPU (e.g a message, or event). A sleeping process consumes no CPU resources until it "wakes up". A ready-to-run process is one that is waiting its turn to use the CPU (it has work to and is ready to become the running process). There may be any number of sleeping and ready-to-run processes.

Each process has several types of memory associated with it. Each type is called a segment. All RTX processes must have all their memory segments resident at all times. A process needs a code (or text) segment and a stack segment. A process may also have a (static) data segment and a (dynamic) heap segment. These segments need not be contiguous.

Any location in memory containing executable 68000 CPU instructions can become an RTX process' text segment. Each process has a parent. A process' parent is the process that created (or spawned) the child.

SCHEDULING

RTX uses two types of CPU Time scheduling: Preemptive task scheduling, and (Round-Robin) Time-slicing.

Each process has a priority associated with it. The RTX kernel uses a very simple scheduling algorithm. It simply selects the process with the highest priority from those in the running or ready-to-run states.

When more than one process occupies the same priority level, time-slicing is used to split up CPU time between the processes. Each process has a quantum (length of time) associated with it. When this quantum is used up, RTX schedules the next process. This repeats as long as several processes are at same priority (and that they are the highest priority processes that are ready-to-run). This is also sometimes called "round-robin" scheduling.

PROCESS CREATION

Once a process' memory segments are loaded into memory (at least the code segment), a new process may be created. Process creation simply is the way a process is made known to RTX. RTX creates a stack segment for the process, and places it on the ready-to-run list. The caller (the process creating the new process) provides the priority, time-slice, load address, input arguments, and stack-size. The priority and time-slice quantum may be altered at run-time.

A pid in RTX is actually the 32-bit address of the process control block (an internal RTX data structure) for the process.

The Pexec GEMDOS call also performs a process creation indirectly. A direct call to the RTX p_create service will spawn and run a loaded process (i.e. it runs a subroutine as a concurrent process). A call to Pexec loads a GEMDOS formatted executable file, and spawns it as an RTX process. RTX also provides a Pexec option that allows the caller to continue processing while the child runs (like fork/exec).

PROCESS CONTROL

The RTX Process Control System Calls are:

p_create	- create and execute a new process
p_delete	- delete (kill) a process
p_priority	- get/set process priority
p_slice	- get/set time-slice quantum
p_suspend	- suspend (stop) a process
p_resume	- resume (re-start) a process
p_lookup	- convert process name to a PID
p_info	- get the state of a process

In RTX, priorities range from 0 to 255; 255 is used for "real-time" processes and 0 is reserved for the idle daemon. A process running at priority 255 never gets time-sliced and will never lose the CPU until it voluntarily blocks (waits for something) or lowers its priority.

INTERPROCESS COMMUNICATION - THE MESSAGE QUEUE

Processes in RTX can communicate by sending messages. The RTX message queue is a many-to-many queue, sort of a named mailbox. The idea is like UNIX create/open/read/write/close. Each message queue has a name and QID. If a process knows the name of the queue, it can determine the QID (like UNIX open). Messages are 4 long-words (16 bytes) fixed size. The first long word (4 bytes) is reserved for RTX. The remaining 3 long-words (12 bytes) are completely user dependent. The messages may contain data, or pointers to data located elsewhere. Any process may send (write) or request (read) a message from any queue for which it has a QID (like a

handle to a file).

Each message queue may be set up as a simple FIFO where waiting processes are queued in the order that they request messages, or it can be set up so that processes are queued in priority order. With a FIFO queue, messages are received (read) in the order that they were sent. With a priority queue, the process with the highest priority that is waiting for a message will receive one first.

RTX message queues can be used for many different kinds of interprocess communication/synchronization facilities, including simple FIFO non-interlocked (simple one-way channel), fully inter-locked (using two queues), and semaphores.

An example of many-to-many usage might be a print spool system where several processes make print requests and several printers are available. One incarnation of a print-spool handler exists for each printer (one print process per printer). There is one RTX message queue which is used for print requests. Each print-spool process requests a message from the print request queue. A process wishing to print something sends a message to the print request queue. The first print-spool process that requested a message receives the print request and starts printing the job. If another process makes a print request, the next print-spool process will print it, until all the printers are busy and there are no more print-spool processes waiting for a message, in which case further print requests will be queued on the message queue and printed by the next available print process when it requests a message from the print queue again.

The RTX message queue services are:

<code>q_create</code>	- create a message queue
<code>q_delete</code>	- delete (close/remove) a message queue
<code>q_send</code>	- send (write) a message
<code>q_req</code>	- request (read) a message (wait or no-wait)
<code>q_jam</code>	- jam a message at the head of the queue
<code>q_lookup</code>	- convert queue name to QID (open)
<code>q_info</code>	- get the status of a message queue

A maximum wait interval (timeout) option may be specified when requesting messages. In this case the caller is awakened when either a message is available or the wait time has expired.

The `q_send` and `q_jam` system calls may be made from interrupt service (ISP) handlers. A special RTX trap is used upon exit from the ISP to force a pre-emptive reschedule (if necessary).

RTX EVENTS

UNIX programmers beware: RTX events are not anything like UNIX signals. The RTX event system is a many-to-one synchronization facility. Each process has associated with it a set of seven user events and seven system (reserved) events. A process can signal a single or a group of events to another process with a single call and it can wait for the occurrence of one or more of its own events.

What event is used for what is completely up to the application developer. RTX places no restrictions on the use of the seven user events. The primary limitation of events is that, unlike messages, events

are not queued. Where overrun is impossible or can be handled, the event system does offer the advantage of specifying multiple events.

The event system calls are:

e_signal	- signal a group of events
e_wait	- wait for one or more events

A process may wait for any of a group of events, in which case it will be awakened when any of the specified events is signaled, or it can wait for all events, in which case it will not be awakened until all the events are signaled. As with messages, a maximum wait interval may be specified to handle timeout situations.

The e_signal system call may be used in ISP routines for real-time pre-emptive applications.

RTX MEMORY MANAGEMENT

RTX uses a first-fit memory allocation algorithm. Memory segments are allocated from system heaps. The RTX kernel splits the first section large enough to meet a users request, returning any remainder back to the free pool. When a segment is released back to RTX, it is merged with its neighboring segments, if one or both of these segments are free.

The RTX memory management calls are:

m_alloc	- allocate a memory segment
m_free	- free a segment
m_assign	- transfer a segment to another process

The GEMDOS Malloc system call uses the RTX m_alloc system call to allocate memory when RTX is installed (this solves some TOS memory management problems).

REAL-TIME PAUSING

RTX provides a call that allows a process to schedule itself at a regular interval, or sleep for a duration of time:

p_pause	- pause (sleep) for a specified time interval
---------	---

The time interval is specified in milliseconds.

TOS, GEMDOS, AND BIOS EXTENSIONS

As stated elsewhere, the Micro RTX kernel processes all GEMDOS and BIOS system calls. All Device and File I/O system calls are handled by the RTX kernel.

In addition to providing compatibility, RTX also implements several extended GEMDOS and BIOS services. The GEMDOS system calls are:

Pexec	- supports "execute concurrently" mode
Popen	- Pipes using GEMDOS file handles

Ftype	- Determine if handle is file/pipe/device
Flock	- File record locking
Fcntrl	- GEMDOS-level character device control
Psettpa	- control the startup TPA (stack) size
Mquota	- limit the Malloc(-1) maximum

The Popen service combined with GEMDOS I/O redirection allows any TOS program using GEMDOS STDIN/STDOUT to be used in pipelines (i.e. the programs do not need to be recompiled to work with pipes).

The Flock call provides file locking for multiuser file access. Any region of a file may be locked (even beyond the end-of-file). When another process attempts to read or write the locked region, the operation will fail, in which case the application may take appropriate actions (i.e. pause and try again). For application developers that wish to implement file record locking in their applications, but do not wish to purchase the Micro RTX Developer's Kit, contact Beckemeyer Development at the address below for details.

The Fcntrl function alters the behavior of character (tty) devices for GEMDOS I/O operations. In the normal case, I/O to terminal devices is "cooked". Using Fcntrl, a program can force NOECHO and/or RAWIO modes.

The BIOS-level RTX extensions are:

d_install	- install a custom device driver
d_cntrl	- BIOS-level device control

The installable device driver mechanism allows the developer to install or replace BIOS devices. The devices are accessed with the Bconxxx BIOS calls, using the device number field.

The standard BIOS devices are:

0 - PRN	- Printer
1 - AUX	- RS-232 port
2 - CON	- System console (screen/keyboard)
3 - MIDI	- Midi port
4 - KBD	- Intelligent keyboard

From GEMDOS these devices may be opened by name (the standard names work with or without RTX installed). For example:

```
fd = Fopen("aux:", 2);
```

Will return a handle that will read/write characters using the RS-232 port. Under RTX, devices may be installed with a BIOS number and GEMDOS name. The device may then be accessed just like any other device in the system. For example, say we have installed a driver for our custom high-speed I/O board as BIOS device 10, and GEMDOS name "fio", then:

```
Bconout(10, c);
```

would send a character to the device, and:

```
fd = Fopen("fio:", 2);
```

opens the device for read/write, and returns a GEMDOS handle in fd that

can be used in any GEMDOS I/O call that uses handles:

```
Fread(fd, count, buf);
```

Reads 'count' bytes (normally using a line editing mechanism but this can be changed by using the Fcntrl call). Likewise:

```
Fwrite(fd, count, buf);
```

writes to the port. The following calls would redirect the standard I/O handles to the special device and then execute a program:

```
Fforce(0, fd);  
Fforce(1, fd);  
Pexec(0, "shell.prg", tail, env);
```

This would cause the program "shell.prg" to send it's output to the special device and read its input from the special device without recompiling.

A device driver may itself use BIOS calls; so one driver can access another driver to as many levels as needed.

As can be seen, the installable device driver facility is one of the most powerful and flexible features of Micro RTX.

SUMMARY

Micro RTX is the result of more than two years of reasearch and development. This is not a fly-by-night "hack" to standard TOS. It isn't a simple scheduler on top of TOS like some of the systems I have seen are.

When looking at multitasking kernels that work with TOS programs, remember there's more to it than just adding a time-slicer. The regular GEMDOS/BIOS handlers are NOT reentrant. The GEMDOS loader doesn't know how to deal with more than one process family (tree). It holds the running PID in a static variable. The multitasking kernel must perform all program loading, exec'ing, and memory allocation, otherwise TOS will get very confused, usually resulting in crashes and/or trashed files.

(Note: Beckemeyer Development has released the newest version of Micro RTX as a shareware product. Full programming documentation is included with the shareware version, including source code to "C" bindings for popular Atari ST "C" compilers.)

End-user registration is a modest \$35, which includes the program disk and printed manual. Full developer status with technical support services is \$75. An advanced commercial version which includes an unlimited binary redistribution license is \$250.

MICRO RTX DEVELOPER KIT \$250.00

Includes:

- Master copy of Micro RTX on diskette
- Micro RTX binary distribution license
- Programmer's Manual
- One year warranty including: bug fixes, minor upgrades,

and telephone support

For More Information, Contact:

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- Sunnyvale, CA. TAIWANESE MADE LYNX DESTINED FOR EUROPE

Atari Japan, subsidiary of ATARI in Sunnyvale, Ca., has commenced production of the Lynx, their portable video game having a color LCD (liquid crystal display) screen, in Taiwan. Structured on an agreement with Efa Corporation, a Taiwan-based manufacturer, Atari Japan is to supply component parts at which time Efa will then complete the video game units. Although the production agreement, at this time, is on a trial basis, Atari Japan intends to produce 80,000 units per month by the end of the year.

The majority of the finished products will be sold through the European sales groups of Atari. For the time being,., Atari Japan will export to the U.K., West Germany, and France, and ultimately to the other European countries by the end of the year. Additionally, Atari Japan will export the Taiwanese manufactured Lynx to the U.S. and Japan, in hopes of overcoming the supply side shortages in both Japn and the USA. Until this agreement, the Lynx had only been made in Japan.

Lynx has sold about 150,000 units in the U.S. and about 100,000 units in Japan

New or pending Software List for the Lynx:

TITLE	RELEASE DATE	PLAYERS
-----	-----	-----
Klax	June/July	2
Rampage	July/August	4
Red Baron	Sept/Oct	4
Vindicators	September	2
Checkerboard Flag	December	8

3-D Barrage	July/August	2
Super Soccer	Sept/Oct	2
Tournament Cyberball	Aug/Sept	2
720 Degrees	October	1
PaperBoy	Aug/Sept	1
A.P.B.	October	1
Rygar	Oct/Nov	1
Stealin' Home	Jan. '91	2
Football	Sept/Oct	2
Grid Runner	Aug/Sept	4
Turbo Sub	Oct/Nov	1
Junkyard Dog Special	November	1
Masters Golf	Not Set	4
Time Lords	Jan. '91	4
Super Hockey	Not Set	2
Pinball Shuffle	December	2
Blockout	Not Set	1
Ninja Gai Den	Not Set	?

- Sunnyvale, CA. ATARI CORP. -> 1ST QUARTER INCOME OF \$1.5m

Atari Corp. reported a net income of \$1.5 million or \$.03 per share on sales of \$85.5 million for the quarter ended Mar. 31, 1990. This compares with net income of \$3.3 million or \$.06 per share on sales of \$88.8 million for the first quarter ended Mar. 31, 1989. The results for the quarter reflect positive revenue growth for the Atari ST and Atari PC MS-DOS compatible product line, along with the new Lynx handheld color video game machine. The decline in revenue from last year is attributable to the impact of intense competition in the company's traditional 2600 and 7800 video game market in the United States. Atari Corporation is among the largest companies in the world manufacturing and marketing personal computers and video games for the home, office and educational marketplaces.

NEC Corp., a premier Japanese electronics manufacturer, announced they would begin production of 4-megabit dynamic ram chips (4MDRAM's) in the United States by 04/91. NEC said its American subsidiary, NEC Electronics Inc. established during March of 1981 in California, plans to produce two million 4MDRAM's monthly in April-September next year and to double its monthly production to four million units by the 2cnd quarter of 1992.

possibility, with "certain new modules" being in production and talk of the NEC monitors being bundled with the Atari computer line. It could even be that the TT and NEC will be married. One thing is for sure, at the rate things are going, any new blood will have a positive effect on the entire Atari Computer scene."

Although the preceding info still remains a rumor, as we have no confirmation YET... we have verified that NEC and Namco (Atari Games) have entered into a co-operative agreement concerning software development and only that. All other "rumors" are just that rumors as is the info from last week. Although STR's sources have alluded to the "big picture" as being that of NEC and a full force thrust aimed at the US market in areas of PC's and ST's being bundled with the NEC monitors. (NO relationship to the AT&T deal) Again, only rumors, but none the less, we felt it was important enough to at least talk about. Of course, there will be those who think that being splashy about these rumors is a means to an end. Here it is nice just know a little about how the 'smart money' in the US computer marketplace is leaning.

- New York City, NY

CONSUMER REPORTS SEZ PORTFOLIO "CUTE"

In their typical "straight to the point" way, Consumer Reports has applauded the Portfolio as being "cute" but for anyone serious about using a portable MS-DOS computer they candidly stated "get a laptop". "While the Portfolio is cute it hardly meets the needs of today's MS-DOS user."

- Chicago, IL.

ATARI ADVANTAGE PACKAGE PROMO STILL ALIVE

From the splashy ads in the European ST magazine, the highly successful promotional effort of bundling software with the 520st is about to come to life in the US.... Known as the Atari Advantage it is aimed at the mass market and it is hoped to draw a very positive reception from the Kresge, M.Ward areas during the CES show. As was mentioned a few months ago in this column, Atari is about to re-enter the mass market merchandising arena. It apparently is hoped that K-Mart etc... will carry the entry level computer Atari plans to offer in the Advantage Package....

- San Francisco, CA.

IS SOVIET SILICON VALLEY ON HORIZON?

We ran this item in issue 416, in our ongoing effort to bring the most accurate news possible, we present this item as a leader into the following story which is an accurate accounting of the events following our original release...

The Soviet Union has signed an agreement with the Bechtel Group, a major engineering, architecture, and construction company, to fund a project studying the feasibility of developing a "Soviet Silicon Valley"

near the city of Troisk, a small city 20 miles southwest of Moscow, which now holds a major Soviet scientific Research Community. Called the Troitsk Research Development Project, it is aimed at designing a commercial high technology center for international businesses to help develop and invest in Soviet advances in fields such as nuclear fusion and laser technology.

The Soviet Union is also giving \$100 million a year to fund this project, which is expected to provide a more conducive environment for the Soviet Union to develop avenues into the worldwide marketplace. Among other things, the Bechtel Group expects to eventually build Conference Centers, a new International Airport, and an advanced telecommunications network in Troisk by the year 2010. By that time Troisk, which currently has a population of 30,000, is expected to have a population of over 100,000...

The Soviet Silicon Summit will bring together leading Soviet and U.S. high-technology business leaders for the first time to establish trade relations between the U.S. and U.S.S.R. high-technology organizations. Scheduled for June 4-June 14, at Techmart in Santa Clara, the Soviet Silicon Summit will be highlighted by a one-day conference.

The summit, featuring top Soviet government officials, is co-sponsored by The East/West Report, Techmart, Global Development Corp. and * ATARI. * During the 10-day summit, the Soviets will meet with the leaders of Silicon Valley firms to form joint ventures, license technologies, establish distribution channels, purchase products and provide design and development services.

On June 8, the co-sponsors will host a one-day conference on doing business in the Soviet Union at which top Soviet government officials will unveil plans for converting military and aerospace microelectronics and communications technologies to commercial uses. The conference also will feature representatives from the U.S. Department of Commerce, State of California, international law experts and leading consultants on U.S. and Soviet business relations.

The summmmit and conference immediately follows the Bush-Gorbachev Summit in which the United States is expected to grant the USSR "Most Favored Nation Status", President Gorbachev's visit to Silicon Valley on June 4, and the anticipated lifting of restrictions by the Coordinating Committee on Multilateral Export Controls (COCOM) on the export of high-technology products to the Soviet Union.

After the Summit, the Soviets will open a full-time sales office at Techmart, operated by Global Development Corp. It will feature demonstrations of Soviet software, Soviet market research data, a research library and a Soviet speakers bureau.

- Dover, DE.

TT030 ARRIVING AT 'SELECT' DEVELOPERS

The TT030, the 'fabled' TT030...Reportedly, there are now TT units in the hands of "select" developers. Does this mean that other developers are not "worthy" of developing on the TT030? Also a few have remarked about the first class construction of these units. They say the machines run quite well and rarely, if ever, crash. And that the cabinets feel

'very strong' and.

- San Francisco, CA

STe UNITS ARE EXPECTED IN JUNE-JULY

Reportedly, the shipments are arriving in the "seatainers" and must clear the official entry point, and of course, all the paper work must be done and then they first make the warehouse. At which time, they are logged in and stored. Now, down comes the orders for shipment to the vast dealer network, all the paperwork, packing etc... Lo and behold its July! Hopefully, the STe will be shipping in the USA within 6 weeks...

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